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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,897	04/16/2004	Ravi Sundaram	03-4024	2220

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EXAMINER	
AHUJA, SUPRIYA	
ART UNIT	**PAPER NUMBER**
2137	

NOTIFICATION DATE	DELIVERY MODE
07/17/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patents@VERIZON.COM

Office Action Summary	Application No.	Applicant(s)	
	10/826,897	SUNDARAM ET AL.	
	Examiner	Art Unit	
	Supriya Ahuja	2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. **Claims 2-20, 22-29, and 40-54** are objected to because of the following informalities:

Claims 2-20, line 1, the phrase "A method" should be replaced by --the method--.

Claims 10-11, line 1, the phrase "a time" should be replaced by --the time--.

Claims 22-29, lines 1-2, the phrase "comprising instructions" and "a processor" should be replaced by --comprising the instructions-- and --the processor--.

Claims 40-54, lines 1-2, the phrase "a processor" and "include instructions" should be replaced by --the processor-- and --include the instructions--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1, 18-21, 23-24, 30, 32-33, 39 and 52-54** are rejected under 35 U.S.C. 102(b) as being anticipated by Asano et al. (US 5815664 dated 09/29/1998).

4. Regarding Claims 1, 21, 30 and 39:

Asano et al. discloses a method or a computer readable medium or a system or a computer program (An address reporting method and an address reporting system, col. 1 lines 11-12; a method can be implemented as a computer medium or a program or a system) of detecting

unauthorized access attempts (unauthorized address, abstract line 6) to a network, the method comprising: receiving a request (requested address, col. 1 line 15) from a user to obtain an address; obtaining said address (abstract lines 1-6, col. 4 lines 41-47);

applying a function (address translation function, abstract line 11) to said address to obtain a return address (The authorized address forming the address pair is returned as a response to the query, col. 4 lines 65-66), said return address corresponding to a used one of a block of addresses (plurality of authorized addresses, col. 5 line 17) (abstract);

returning said return address to said user (The address reporting device returns the authorized address, abstract line 16-17, col. 4 lines 65-66, col. 5 lines 30-32);

monitoring access to said address (It is implicit that the reporting devices monitoring access to the network); and

detecting (determining that the address corresponding to the machine name is designated in the query is the unauthorized address, col. 5 lines 22-24) an unauthorized attempt to access said address when an attempted address corresponds to an unused one of said block of addresses (unauthorized addresses, col. 5 lines 18; address pair register table and/or an address mapping table, abstract).

5. Regarding claims 18, 23, 32, and 52, Asano et al. discloses a method or a computer readable medium or a system or a computer program (An address reporting method and an address reporting system, col. 1 lines 11-12; a method can be implemented as a computer medium or a program or a system), wherein detecting (determining, abstract line 7) comprises tracing (searches, abstract line 9) said user when said attempted address corresponds to said unused one of said block of addresses (unauthorized address, abstract line 8) (determined that the

address corresponding to the machine name designated in the query is an unauthorized address, the address reporting device searches an address pair register table and/or an address mapping table stored in a router equipped with address translation function, abstract lines 7-11, Fig. 5).

6. Regarding claims 19, 24, 33, and 53, Asano et al. discloses a method or a computer readable medium or a system or a computer program (An address reporting method and an address reporting system, col. 1 lines 11-12; a method can be implemented as a computer medium or a program or a system), comprising blocking additional unauthorized attempts (Fig. 5 Steps T13 and T17, col. 25 lines 6-7) when said attempted address (query, Fig. 5) corresponds to said unused one of said block of addresses (unauthorized address, abstract line 8).

7. Regarding claims 20, and 54, Asano et al. discloses a method or a computer readable medium or a system or a computer program (An address reporting method and an address reporting system, col. 1 lines 11-12; a method can be implemented as a computer medium or a program or a system), wherein unused ones of said block of addresses (unauthorized address, abstract line 8) correspond to attack detectors (It is implicit that the unauthorized address block represents a sort of a attack detector, as it is basically a list of addresses that are blocked from accessing the network and if an address tries to access the network which is on this list, it acts like an attack detector).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. **Claims 2-8, 13-17, 22, 25, 28-29, 31, 34, 37-38, 40-44 and 47-51** are rejected under 35 U.S.C. 103(a) as being unpatentable over Asano et al. (US 5815664 dated 09/29/1998), and in view of Bruce Schneier ("Applied Cryptography: protocols, algorithms, and source code in C", 2nd edition, published October 1995).

10. Regarding claims 2, 3, 7, 22, 31 and 40, Asano et al. discloses the method or the computer readable medium or the system or the computer program (An address reporting method and an address reporting system, col. 1 lines 11-12; a method can be implemented as a computer medium or a program or a system), where there is provided an address mapping table by which one of the plurality of authorized addresses can be identified by specifying one of the unauthorized addresses (col. 5 lines 65-67).

Asano et al. discloses all the limitations of claims 2, 3, 7, 22, 31 and 40 except for a hashing function that hashes the address and the time of the request.

Bruce Schneier discloses One-Way Hash Functions Pages 351-354, 429-459 discloses hash functions to hash data using different function, where data can be an address or the time of the request.

It would have been obvious to modify Asano et al. by substituting a hash function as taught by Bruce Schneier to make it more secure.

11. Regarding claims 4, 13, 41, and 47, Asano et al. discloses a method or a computer readable medium or a system or a computer program (An address reporting method and an address reporting system, col. 1 lines 11-12; a method can be implemented as a computer medium or a program or a system), wherein detecting (determining, abstract line 7) comprises

tracing (searches, abstract line 9) said user when said attempted address corresponds to said unused one of said block of addresses (unauthorized address, abstract line 8) (determined that the address corresponding to the machine name designated in the query is an unauthorized address, the address reporting device searches an address pair register table and/or an address mapping table stored in a router equipped with address translation function, abstract lines 7-11, Fig. 5).

12. Regarding claims 5, 14, 42, and 48, Asano et al. discloses a method or a computer readable medium or a system or a computer program (An address reporting method and an address reporting system, col. 1 lines 11-12; a method can be implemented as a computer medium or a program or a system), comprising blocking additional unauthorized attempts (Fig. 5 Steps T13 and T17, col. 25 lines 6-7) when said attempted address (query, Fig. 5) corresponds to said unused one of said block of addresses (unauthorized address, abstract line 8).

13. Regarding claims 6, 15, 43, and 49, Asano et al. discloses a method or a computer readable medium or a system or a computer program (An address reporting method and an address reporting system, col. 1 lines 11-12; a method can be implemented as a computer medium or a program or a system), wherein unused ones of said block of addresses (unauthorized address, abstract line 8) correspond to attack detectors (It is implicit that the unauthorized address block represents a sort of a attack detector, as it is basically a list of addresses that are blocked from accessing the network and if an address tries to access the network which is on this list, it acts like an attack detector).

14. Regarding claims 8, 25, 34 and 44, Asano et al. discloses the method or the computer readable medium or the system or the computer program (An address reporting method and an address reporting system, col. 1 lines 11-12; a method can be implemented as a computer

medium or a program or a system), wherein applying said function comprises changing said used one of said block of addresses (plurality of authorized addresses, col. 5 line 17) over time (host names and address mapping, col. 2 lines 60-64, col. 3 lines 60-67).

Bruce Schneier discloses One-Way Hash Functions Pages 351-354, 429-459 discloses hash functions to hash data using different function, where data can be an address or the time of the request. It would have been obvious to modify Asano et al. by substituting a hash function as taught by Bruce Schneier to make it more secure.

15. Regarding claims 16, 28, 37, and 50, Asano et al. discloses the method or the computer readable medium or the system or the computer program (An address reporting method and an address reporting system, col. 1 lines 11-12; a method can be implemented as a computer medium or a program or a system), further comprising determining said attempt is authorized when a connection exists between said user and said unused address (unauthorized address, abstract line 8) (When it is determined that the address corresponding to the machine name designated in the query is one of the plurality of unauthorized addresses, an address pair formed of the unauthorized address and one of the plurality of authorized addresses is prepared and registered in the address pair register table, col. 5 lines 37-43, col. 2 lines 32-39).

16. Regarding claims 17, 29, 38, and 51, Asano et al. discloses the method or the computer readable medium or the system or the computer program (An address reporting method and an address reporting system, col. 1 lines 11-12; a method can be implemented as a computer medium or a program or a system), wherein changing said used one of said block of addresses comprises coordinating changes in a name-to-address database (If the address corresponding to the designated machine name is not registered in the address pair register table, one of the

authorized addresses not registered in the address pair register table is specified the address pair formed by the unauthorized address corresponding to the designated machine name and the specified authorized address is registered in the address pair register table, col. 14 lines 50-57) and a host identity-to-address database (host names and address mapping, col. 2 lines 60-64, col. 3 lines 60-67).

17. **Claims 9, 10, 11, 26, 35 and 45** are rejected under 35 U.S.C. 103(a) as being unpatentable over Asano et al. (US 5815664 dated 09/29/1998), and in view of Bruce Schneier ("Applied Cryptography: protocols, algorithms, and source code in C", 2nd edition, published October 1995) and Ramakrishnan et al. (US 6085215 dated 07/04/2000).

18. Regarding claims 9, 10, 11, 26, 35 and 45, Asano et al. discloses the method or the computer readable medium or the system or the computer program (An address reporting method and an address reporting system, col. 1 lines 11-12; a method can be implemented as a computer medium or a program or a system), further comprising instructions for controlling a processor (It is implicit that a processor exists for the instructions to execute) to change said used one of said block of addresses (plurality of authorized addresses, col. 5 line 17) over time.

Asano et al. does not disclose one of determining a time period using a pre-selected time period and determining a time period by generating a random time period.

Ramakrishnan teaches a real time domain which includes a set of real time processing threads, each of which performs a limited amount of processing for a certain task, such as processing receive packets between one layer and another. Each real time thread is non-interruptible for the period that it operates, and its period of operation is predetermined by permitting only a selected member of units to be processed (col. 8 lines 43-50, claim 1 lines 8-12). It would have been

obvious to modify Asano et al. and Bruce Schneier by substituting a pre-selected time period as taught by Ramakrishnan, since Ramakrishnan suggests at claim 1 lines 8-12 that the general purpose processing thread is structured to execute for a preselected minimum time during which it is non preemptable by other treads to execute in preemptable mode.

19. **Claims 12, 27, 36, and 46** are rejected under 35 U.S.C. 103(a) as being unpatentable over Asano et al. (US 5815664 dated 09/29/1998), and in view of Bruce Schneier ("Applied Cryptography: protocols, algorithms, and source code in C", 2nd edition, published October 1995) and Cherian et al. (US 5930497 dated 07/27/1999).

20. Regarding claims 12, 27, 36, and 46, Asano et al. discloses the method or the computer readable medium or the system or the computer program (An address reporting method and an address reporting system, col. 1 lines 11-12; a method can be implemented as a computer medium or a program or a system), wherein changing said used one of said block of addresses (plurality of authorized addresses, col. 5 line 17). However, Asano et al. does not disclose randomly choosing said used one from said block of addresses.

Cherian et al. discloses randomly choosing the next address from the group of addresses (col. 4 lines 23-27). It would have been obvious to modify Asano et al. and Bruce Schneier by substituting random choosing of addresses to provide randomized accessing (col. 5 lines 25-30)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Supriya Ahuja whose telephone number is 571-270-1588. The examiner can normally be reached on Monday - Thursday 9:30 -7:00; 2nd Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on 571-272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Supriya Ahuja

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07/06/2007

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